

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 10878-2 (1984): Flat form springs, Part 2: springs made from rectangular cold-rolled strips [TED 21: Spring]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

FLAT-FORM SPRINGS

PART 2 SPECIFICATION FOR SPRINGS MADE
FROM RECTANGULAR COLD-ROLLED STRIPS

1. Scope — Covers dimensions and quality specifications of cold formed flat springs made from rectangular cold-rolled strips up to 3'0 mm thick.
- 1.1 It does not cover the specification for disc springs and similar products.
2. Drawing Specifications — The drawing should contain the following information :

a) View of the flat form spring in unloaded condition.

b) Dimensioned view of the spring in fitted condition.

c) Material specification giving designation of grade of steel as indicated in IS : 2507-1975 or other grade of steel or non-ferrous material alongwith :

1) Hardness

2) Surface treatment

3) Edge condition like cut edges, natural edges and rounded edges.

d) Additional information as far as possible like details of the function or application, deflection of spring, loads, points of application of loads, type of loading, point of support, approximate developed dimension, maximum working temperature, etc.
3. Modulus of elasticity of strips for design of flat formed springs is as given below:

Material	Modulus of Elasticity
1) Cold-rolled steel strip for springs as per IS : 2507-1975 'Cold-rolled steel strip for springs (first revision)'	206 000 N/mm ²
2) Austenitic stainless steel strips as per IS : 6911-1972 'Stainless steel plate sheet and strip'	190 200 N/mm ²
3) Phosphor bronze strips as per IS : 7814-1975 'Phosphor bronze sheet strip and foil'	105 000 N/mm ²
4) Copper beryllium strips	127 000 N/mm ²

3.1 The modulus of elasticity values specified as Sl No. 2, 3 and 4 above are for general guidance only. Reference may be made to the material manufacturer for more exact values.

4. Tolerances on Dimensions

4.1 Tolerances on dimensions shall be as follows:

All dimensions in millimetres.

Feature	Range of Nominal Width						
	Above	0.5	3	6	30	120	315
	Up to and including	3	6	30	120	315	1 000
Blank Dimensions		±0.1	±0.1	±0.2	±0.3	±0.5	±0.8
Formed Dimensions		—	±0.2	±0.5	±0.8	±1.2	±2.0

Tolerance on angles 10° Min. (This tolerance to be distributed on nominal angles according to requirements.)

Spring Sectional Committee, EDC 75; Wire and Strip Components Subcommittee, EDC 75 : 3 [Ref : Doc : EDC 75 (3622)]

IS : 10878 (Part 2) - 1984

4.2 Requirements other than those specified in **4.1**, shall be according to agreement between the purchaser and the supplier.

5. Hardness — As applicable for various material specified under **3**.

6. Surface Finish — To protect against corrosion, springs may be smeared with grease or oil. Other anticorrosive treatment may be applied subject to agreement between the purchaser and the manufacturer.

7. Testing — Most flat formed springs require special load testing fixtures. While the points of anchoring and loading should be specified in the drawing, the fixture to be adopted for testing should be agreed upon between the purchaser and supplier.

7.1 Endurance Testing — If required, the number of cycles, stroke frequency and the type of fixture should be agreed upon between the purchaser and the supplier.

7.2 Adjustments for Manufacturing — When a load is specified at the fitted condition of a flat spring, the unloaded height of the spring should be left to manufacturer's discretion for load adjustment.